

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with the Applicant's representative Robert W. Downs on September 03, 2009.

Please amend claim 23 as follows:

**Claim 23** (currently amended) a data communication apparatus for receiving data transmitted intermittently from a transmitting side, storing the data into a buffer memory and playing the data stored in the buffer memory in parallel with the data storing, comprising: a multimedia data communication controller for setting up a intermittent transmission schedule which will not cause either overflow or underflow during a real-time playback of the data, based on a data characteristic of the data; a communicator for transmitting the intermittent transmission schedule to the transmitting side to make a proposal of the intermittent schedule in order to receive an approval or disapproval of the proposed intermittent transmission schedule and to receive data transmitted intermittently based on the intermittent transmission schedule; and an electric power supply controller for stopping electric power supply to the communicator during a non-transmission time based on the intermittent transmission schedule.

### **Reasons For Allowance**

2. The following is an examiner's statement of reasons for allowance:
3. Claims 1-28, 30-44, 46-49 are allowed (renumbering as 1-47 respectively).

The present invention is directed to a data communication apparatus and a method for receiving data transmitted intermittently from a transmitting side and playing the data in real time and its intermittent communication method, and is characterized in that, based on the data characteristic of the data, the transmission information as to the data transmitted from the transmitting side, according to which the data communication apparatus will not cause either overflow or underflow in real-time playback of the data, is determined.

**Regarding independent claim 1** (Currently Amended) an intermittent communication method for data communication apparatus, comprising: a reception step for receiving data transmitted intermittently from a communication partner side and storing the data into a buffer memory; a playback step for playing the stored data in the buffer memory in parallel with the reception step; a first setup step for setting up a first intermittent transmission schedule which will not cause either overflow or underflow of data in the buffer memory, based on a data characteristic of the data; a proposal step for transmitting the first intermittent transmission schedule to a communication partner side to make a proposal of the first intermittent transmission schedule in order to receive an approval or disapproval of the proposed first intermittent transmission schedule; and an electric power supply stop step for stopping electric power supply to an inter-node

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communicator during a non-transmission time based on a current intermittent transmission schedule of the data being transmitted intermittently.

**Regarding independent claim 23** (currently amended) a data communication apparatus for receiving data transmitted intermittently from a transmitting side, storing the data into a buffer memory and playing the data stored in the buffer memory in parallel with the data storing, comprising: a multimedia data communication controller for setting up a intermittent transmission schedule which will not cause either overflow or underflow during a real-time playback of the data, based on a data characteristic of the data; a communicator for transmitting the intermittent transmission schedule to the transmitting side to make a proposal of the intermittent schedule in order to receive an approval or disapproval of the proposed intermittent transmission schedule and to receive data transmitted intermittently based on the intermittent transmission schedule; and an electric power supply controller for stopping electric power supply to the communicator during a non-transmission time based on the intermittent transmission schedule.

**Regarding independent claim 25** (Previously Presented) a data communication apparatus for playing received data, comprising: an inter-node communicator for transmission of a transmission schedule to and for reception of data from a communication partner appliance; a buffer memory for storing the data received by the inter-node communicator; a data player for playing the storage data stored in the buffer memory in parallel while the buffer memory is implementing a buffering process of

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storing the data; a data quality manager for storing quality management information of the received data to be played; a schedule judging portion for transmitting via the inter-node communicator a transmission schedule of the data to the communication partner appliance, according to which the buffer memory will not cause either overflow or underflow; and an electric power supply controller for stopping electric power supply to the communicator during a non-transmission time based on the transmission schedule, wherein the transmission schedule is set up based on the quality management information.

**Regarding independent claim 26** (Previously Presented) a data communication apparatus, comprising: an inter-node communicator for transmitting a transmission schedule to a communication partner appliance and receiving data from the communication partner appliance; a data quality manager for storing quality management information of the data; a schedule judging portion for transmitting via the inter-node communicator the transmission schedule of the data to the communication partner appliance, according to which a buffer memory of the communication partner appliance will not cause either overflow or underflow; and an electric power supply controller for stopping electric power supply to the communicator during a non-transmission time based on the transmission schedule, wherein the transmission of the data is performed based on the transmission schedule and the transmission schedule is set up based on the quality management information.

The closest prior arts of record based on upon updated search, Goldhor '656 discloses a data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited in col. 2, lines 66 – col. 3, lines 15) for receiving data (fig. 2, User System 300, recited in col. 3, lines 4-12) transmitted intermittently ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20, "intermittently arriving data", recited in col. 22, lines 30-37) from a transmitting side (fig. 2, Streaming Data Source 100, recited in col. 3, lines 1-9), storing the data ("buffered input data at the Capture Buffer 400", recited in col. 3, lines 35-43) into a buffer memory (fig. 2, Capture Buffer 400, recited in col. 3, lines 8-16) and playing the data stored ("playback associated with buffer", recited in col. 6, lines 4-19, fig. 2, Playback System 500, recited in col. 3, lines 35-43) in the buffer memory (fig. 2, Capture Buffer 400, recited in col. 3, lines 8-16) in real time in parallel ("data transmission which corresponds to real-time playback", recited in col. 22, lines 9-14) with the data storing ("playback associated with buffer", recited in col. 6, lines 4-19, comprising: a multimedia data communication controller (fig. 2, fig. 7, Time Scale Modification 800 and Time Scale Modification Rate Determiner 700) for setting up a intermittent transmission schedule (fig. 7, Time Scale Comparator, "computes a control parameter", recited in col. 12, lines 15-25, System Clock 5300, recited in col. 11, lines 43-56) which will not cause either overflow or underflow ("time scale modification desired to avoid data overflow or data overflow", recited in col. 12, lines 44-49) during a real-time playback of the data ("data transmission which corresponds to real-time playback", recited in col. 22, lines 9-14), based on a data characteristic of the data

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("stream of data representing portions of audio, audio-visual work", recited in col. 19, lines 7-15).

Asar '557 from the same field of endeavor discloses a conventional method and system for measuring the performance and then computes the transmission schedule based on the performance measurements, col. 2, lines 9-16, col. 7, lines 41-48, col. 3, lines 7-19, col. 5, lines 17-27.

Sen '312 from a similar field of endeavor, disclose a conventional method of multicasting video via intermediate nodes and determining a smoothed transmission schedules (col. 2, lines 19-29, col. 4, lines 56-67) and distributing of multicast video streaming to multiple clients nodes based on the computed schedules, col. 3, lines 25-27, 38-47.

Laroia '084 from a similar field of endeavor discloses an electric power supply stop step for stopping electric power supply to communicator during a non-transmission time based on a current intermittent transmission schedule (noted: base station and wireless controller with means for turning off (i.e. sleep mode when not in the standby mode of operation) the wireless terminal circuitry after receiving paging signals in associated time slots, paragraphs 0021, lines 1-10).

The closest prior arts are silent with respect to the uniquely distinct claimed features: "a proposal step for transmitting the first intermittent transmission schedule to a communication partner side to make a proposal of the first intermittent transmission schedule in order to receive an approval or disapproval of the proposed first intermittent transmission schedule; and an electric power supply stop step for stopping electric

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power supply to an inter-node communicator during a non-transmission time based on a current intermittent transmission schedule of the data being transmitted intermittently”, “a schedule judging portion for transmitting via the inter-node communicator a transmission schedule of the data to the communication partner appliance, according to which the buffer memory will not cause either overflow or underflow; and an electric power supply controller for stopping electric power supply to the communicator during a non-transmission time based on the transmission schedule, wherein the transmission schedule is set up based on the quality management information”.

The prior arts of record based upon updated search either singularly or in combination fail to anticipate or render the uniquely distinct claimed features obvious.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hejna et al (US 2003/0041158 A1), Hagai et al (US 7,051,110 B2), Nakamura et al (US 6,721,818 B1), Kageyama et al (US 2002/0046311 A1), Hannaksela et al (US 2002/0105951 A1), Ido et al (US 2002/0150078 A1), Gupta et al (US 2003/0152093 A1), Newson et al (US 2005/0083938 A1) and Hodgkinson et al (US 7,209,437 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CANDAL ELPENORD whose telephone number is (571) 270-3123. The examiner can normally be reached on Monday through Friday 8:00AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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